



Launch Mission Execution Forecast



Mission: Falcon 9 Starlink 4-5

Issued: 3 Jan 2022 / 0830L (1330Z)

Valid: 6 Jan 2022 / 1649 – 1847L (2149 – 2347Z)

Forecast Discussion: A frontal boundary moved through Central Florida this morning, leaving behind gusty northwesterly winds and a brief period of cooler, drier air. By Tuesday, winds will become onshore, moderating the temperature at the Spaceport and bringing a slight chance for a short-lived, coastal shower. On Wednesday the boundary pushes back north over the Space Coast, increasing cloud coverage and rain chances late. Through the day Thursday, the unsettled weather is pulled away as a low pressure system moves north along the Atlantic Coast. This will make way for another area of high pressure to build in, slowly clearing the cloud cover and instability over the Spaceport. The primary weather concern for a Thursday launch attempt is the Cumulus Cloud Rule associated with the boundary in the area.

On Friday, the high pressure area moves into the Northeast U.S., creating northeasterly winds at the Spaceport. The primary weather concerns for a Friday launch attempt remains the Cumulus Cloud Rule with the addition the Thick Cloud Layer Rule associated with mid-level instability.

Launch Day	Probability of Violating Weather Constraints					
	20%	Primary Concerns: Cumulus Cloud Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 70°F / 66%	Cumulus	Few	3,000	8,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 360° 8 - 12 mph	Altostratus	Few	12,000	15,000	Solar Activity: Low	

24-Hour Delay	Probability of Violating Weather Constraints					
	30%	Primary Concerns: Cumulus Cloud Rule, Thick Cloud Layer Rule				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds			Upper-Level Wind Shear: Low	
	Type	Coverage	Base (ft)	Tops (ft)		
Temp/Humidity: 70°F / 66%	Cumulus	Few	3,000	8,000	Booster Recovery Weather: Low	
Liftoff Winds (200'): 020° 12 - 17 mph	Altostratus	Scattered	12,000	15,000	Solar Activity: Low	

Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

Next Forecast Will Be Issued	4 Jan 2022
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